

CHAPTER 4

RDA PERFORMANCE DATA

Section 4.1 Introduction

Figure 4-1 shows the organization of the Performance Data window. To open the Performance Data window, the operator selects the **Performance Data** button on the Main RDA HCI (Figure 2-3). The **Performance Data** button is only available on the RDA HCI when the operator has successfully logged into the RDA.

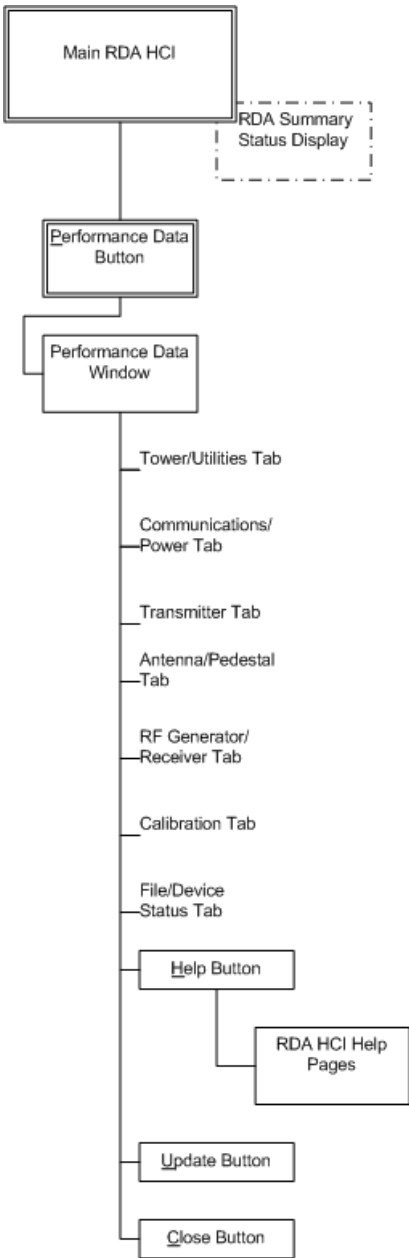


Figure 4-1. Performance Data Organization

4.1.1 INSPECT PERFORMANCE DATA.

When the Performance Data window is open, the operator can switch between the Performance Data categories by selecting the related tabs. The Performance Data is protected, thus the operator cannot edit the text manually.

When the operator hovers the pointer over the value of the item, a tool tip appears and displays the range for the item. When the text in the value textbox is red, the item is either in a fault condition or outside the acceptable range. Items with no tool tip are not checked for fault conditions.

4.1.2 UPDATE THE PERFORMANCE DATA.

RDA Performance Data is not continually updated. The information displayed is static. To update the information in the Performance Data window, the operator presses the **Update** button located at the bottom of the window.

4.1.3 HELP FOR THE PERFORMANCE DATA.

If the operator needs to access the help documentation for the Performance Data window, the operator presses the **Help** button located at the bottom right hand corner of the Performance Data window. This opens up the RDA HCI Help pages ([Figure 2-48](#)).

4.1.4 EXIT THE RDA PERFORMANCE DATA WINDOW.

To exit the Performance Data window, the operator presses the **Close** button located at the bottom right of the Performance Data window. The Performance Data window closes, and the operator returns to the RDA HCI.

Section 4.2 Tower/Utilities Tab

When the operator selects the Tower/Utilities tab, the operator will be able to view the items related to the tower and utilities. See [Figure 4-2](#).

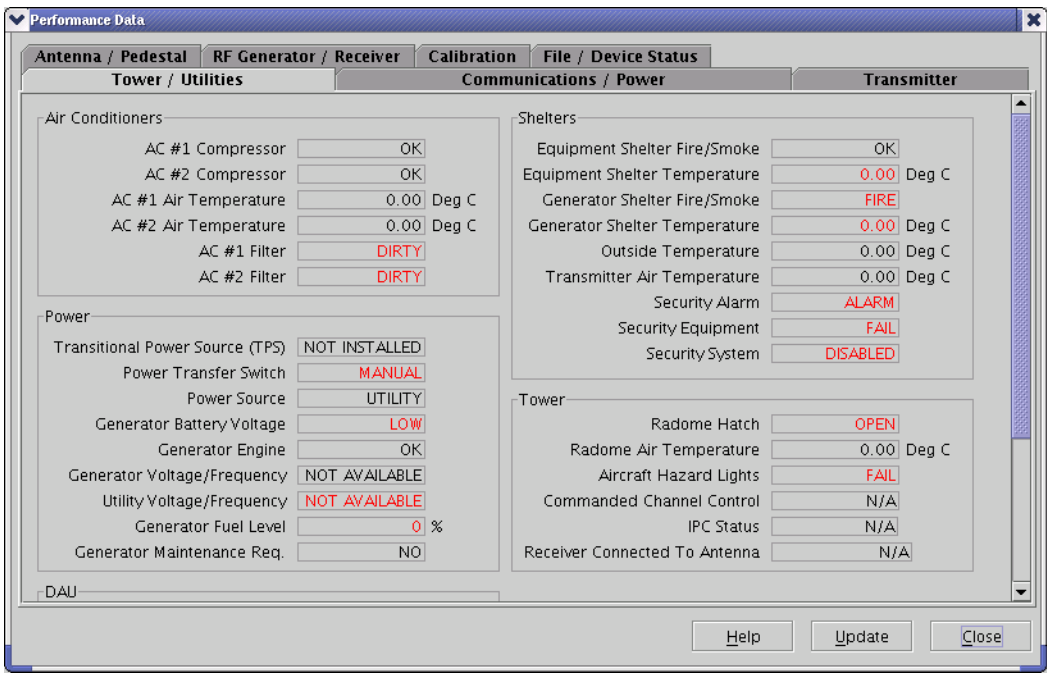


Figure 4-2. Tower/Utilities Tab of the RDA Performance Data Window

The Tower/Utilities tab has five categories of items. The Tables below list the five categories and their items (from top left to bottom right).

Table 4-1. Air Conditioners Category

Field	Valid Range
AC Unit #1 Compressor Shutoff	OK - SHUTOFF
AC Unit #2 Compressor Shutoff	OK - SHUTOFF
AC Unit #1 Air Temperature	Dynamically set from tolerance found in Adaptation Data
AC Unit #2 Air Temperature	Dynamically set from tolerance found in Adaptation Data
AC Unit #1 Filter	OK - DIRTY

Table 4-1. Air Conditioners Category - Continued

Field	Valid Range
AC Unit #2 Filter	OK - DIRTY

Table 4-2. Power Category

Field	Valid Range
Transitional Power Source (TPS)	OK - OFF - NOT INSTALLED
Power Transfer Switch	AUTO - MANUAL
Power Source	UTILITY - GENERATOR
Generator Battery Voltage	OK - LOW
Generator Engine	OK - FAIL
Generator Voltage/Frequency	AVAILABLE - NOT AVAILABLE
Utility Voltage/Frequency	AVAILABLE - NOT AVAILABLE
Generator Fuel Level	Dynamically set from value in Adaptation Data.
Generator Maintenance Req.	YES - NO

Table 4-3. DAU Category

Field	Valid Range	Normal Range
DAU TEST 0	7.0 to 11.0	10
DAU TEST 1	113.0 to 136.0	127
DAU TEST 2	221.0 to 252.0	245
DAU UART	OK - FAIL	N/A
DAU +28V PS	Dynamically set from value in Adaptation Data.	N/A
DAU +15V PS	Dynamically set from value in Adaptation Data.	N/A
DAU +5V PS	Dynamically set from value in Adaptation Data.	N/A

Table 4-3. DAU Category - Continued

Field	Valid Range	Normal Range
DAU -15V PS	Dynamically set from value in Adaptation Data.	N/A

Table 4-4. Shelters Category

Field	Valid Range
Equipment Shelter Fire/Smoke	OK - FIRE
Equipment Shelter Temperature	Dynamically set from value in Adaptation Data.
Generator Shelter Fire/Smoke	OK - FIRE
Generator Shelter Temperature	Dynamically set from value in Adaptation Data.
Outside Temperature	-50 - +50
Transmitter Air Temperature	Dynamically set from value in Adaptation Data.
Security Alarm	OK - ALARM
Security Equipment	OK - FAIL
Security System	OK - DISABLED

Table 4-5. Tower Category

Field	Valid Range
Radome Hatch	OPEN - CLOSED
Radome Air Temperature	Dynamically set from value in Adaptation Data.
Aircraft Hazard Lightning	OK - FAIL
Commanded Channel in Control	CHANNEL 1 - CHANNEL 2 - N/A
IPC Status	OK - FAIL - N/A
Receiver Connected to Antenna	CONNECTED - NOT CONNECTED - N/A

Section 4.3 Communications/Power Tab

When the operator selects the Communications/Power tab, the operator will be able to view the items related to communications and power. See [Figure 4-3](#).

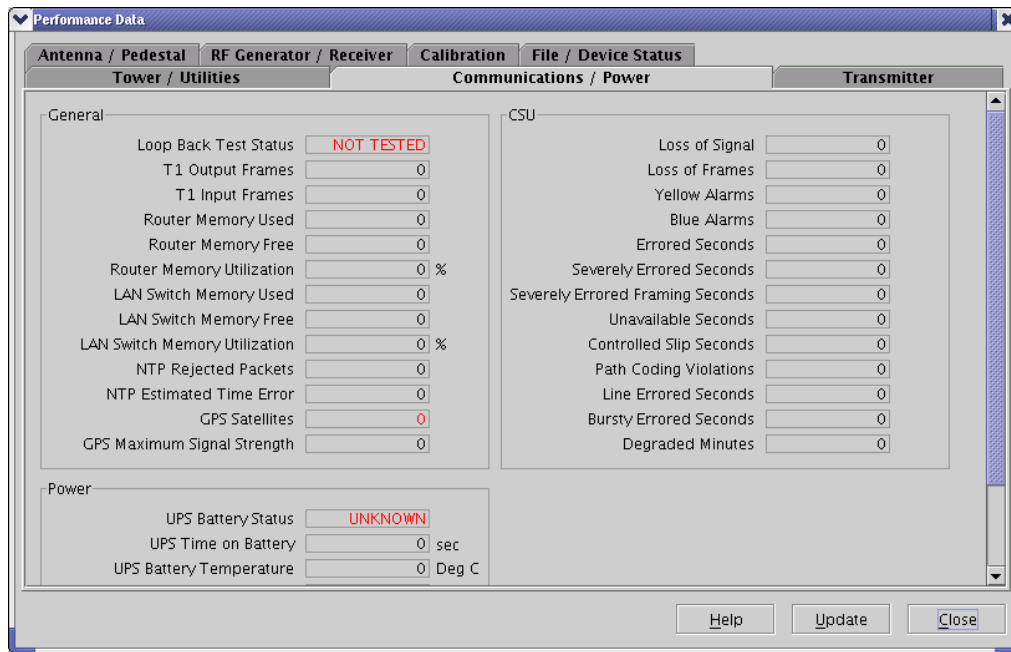


Figure 4-3. Communications/Power Tab of the RDA Performance Data Window

The Communications/Power tab has three categories of items. The Tables below list the three categories and their items (from top left to bottom right).

Table 4-6. General Category

Field	Valid Range
Loop Back Test Status	PASS - FAIL - TIMEOUT - NOT TESTED
T1 Output Frames	N/A
T1 Input Frames	N/A
Router Memory Used	N/A
Router Memory Free	N/A
Router Memory Utilization	N/A

Table 4-6. General Category - Continued

Field	Valid Range
LAN Switch Memory Used	N/A
LAN Switch Memory Free	N/A
LAN Switch Memory Utilization	N/A
NTP Rejected Packets	N/A
NTP Estimated Time Error	N/A
GPS Satellites	N/A
GPS Maximum Signal Strength	N/A

Table 4-7. Power Category

Field	Valid Range
UPS Battery Status	UNKNOWN - OK - LOW
UPS Time on Battery	N/A
UPS Battery Temperature	N/A
UPS Output Voltage	N/A
UPS Output Frequency	N/A
UPS Output Current	N/A
Power Administrator Load	N/A

Table 4-8. CSU Category

Field
Loss of Signal
Loss of Frames
Yellow Alarms
Blue Alarms
Errored Seconds
Severley Errored Seconds

Table 4-8. CSU Category - Continued

Field
Severely Errored Framing Seconds
Unavailable Seconds
Controlled Slip Seconds
Path Coding Violations
Line Errored Seconds
Bursty Errored Seconds
Degraded Minutes

Section 4.4 Transmitter Tab

When the operator selects the Transmitter tab, the operator will be able to view the items related to the transmitter. See [Figure 4-4](#).

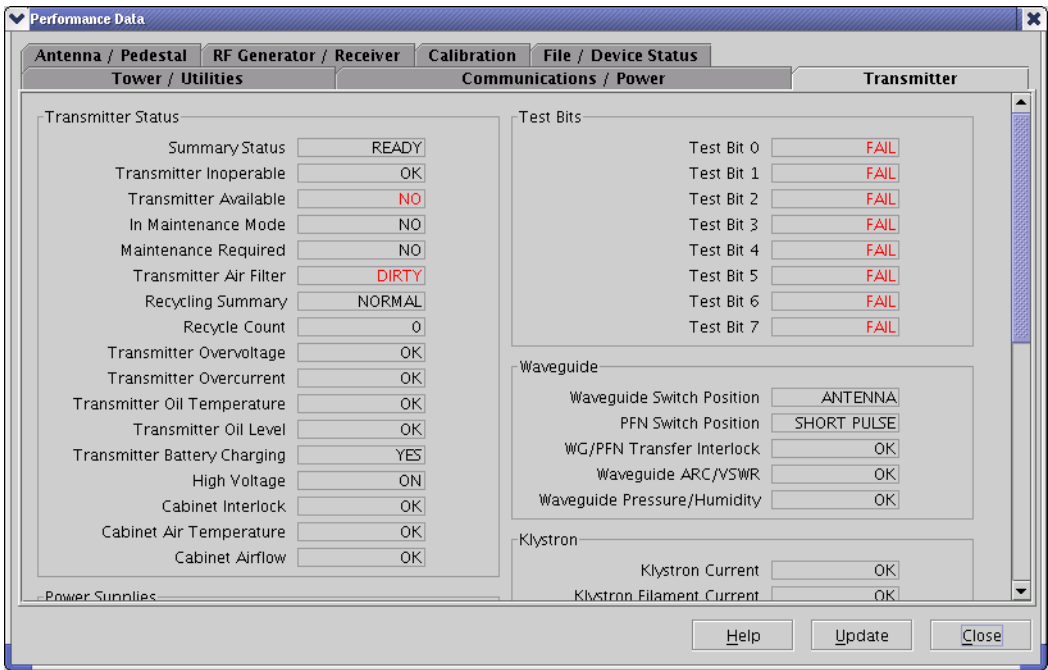


Figure 4-4. Transmitter Tab of the RDA Performance Data Window

The Transmitter tab has seven categories of items. The Tables below list the seven categories and their items (from top left to bottom right).

Table 4-9. Transmitter Status Category

Field	Valid Range
Summary Status	READY - ALARM - MAINTENANCE - RECYCLE - PREHEAT
Transmitter Inoperable	INOP - OK
Transmitter Available	YES - NO
In Maintenance Mode	YES - NO
Maintenance Required	NO - REQUIRED

Table 4-9. Transmitter Status Category - Continued

Field	Valid Range
Transmitter Air Filter	OK - DIRTY
Recycling Summary	NORMAL - RECYCLING
Recycle Count	N/A
Transmitter Overvoltage	OVER - OK
Transmitter Overcurrent	OVER - OK
Transmitter Oil Temperature	OK - FAIL
Transmitter Oil Level	OK - FAIL
Transmitter Battery Charging	NO - YES
High Voltage	ON - OFF
Cabinet Interlock	OPEN - OK
Cabinet Air Temperature	OK - FAIL
Cabinet Airflow	OK - FAIL

Table 4-10. Power Supplies Category

Field	Valid Range
Main Power Voltage	OK - OVER
+5V VDC	OK - FAIL
+15V VDC	OK - FAIL
-15V VDC	OK - FAIL
+28V VDC	OK - FAIL
+45V VDC	OK - FAIL
Filament PS	ON - OFF
Filament PS Voltage	OK - FAIL
Vacuum Pump PS Voltage	OK - FAIL
Focus Coil PS Voltage	OK - FAIL

Table 4-11. Power Readings Category

Field	Valid Range
Transmitter RF Power	N/A
Transmitter Peak Power	Dynamically set from value in Adaptation Data.
Transmitter RF Average Power	N/A
Transmitter Power Meter Zero	N/A

Table 4-12. Test Bits Category

Field	Valid Range
Test Bit 0	OK - FAIL
Test Bit 1	OK - FAIL
Test Bit 2	OK - FAIL
Test Bit 3	OK - FAIL
Test Bit 4	OK - FAIL
Test Bit 5	OK - FAIL
Test Bit 6	OK - FAIL
Test Bit 7	OK - FAIL

Table 4-13. Waveguide Category

Field	Valid Range
Waveguide Switch Position	ANTENNA - DUMMY LOAD
PFN Switch Position	LONG PULSE - SHORT PULSE
WG/PFN Transfer Interlock	OPEN - OK
Waveguide ARC/VSWR	OK - FAIL
Waveguide Pressure/Humidity	OK - FAIL

Table 4-14. Klystron Category

Field	Valid Range
Klystron Current	OVER - OK
Klystron Filament Current	OK - FAIL
Klystron Vacion Current	OK - FAIL
Klystron Air Temperature	OK - FAIL
Klystron Airflow	OK - FAIL
Klystron Warming	NORMAL - PREHEAT

Table 4-15. General Category

Field	Valid Range
DAU Interface	OK - FAIL
Modulator Overload	OK - FAIL
Modulator Inv Current	OK - FAIL
Modulator Switch Fail	OK - FAIL
Flyback Charger	OK - FAIL
Inverse Diode Current	OK - FAIL
Trigger Amplifier	OK - FAIL
Circulator Temperature	OK - FAIL
Spectrum Filter Pressure	OK - FAIL
Modulator Switch Maintenance	REQUIRED - OK
Post Charge Regulator	MAINTENANCE - OK
Focus Coil Current	OK - FAIL
Focus Coil Airflow	OK - FAIL
PRF Limit	OK - FAIL

Section 4.5 Antenna/Pedestal Tab

When the operator selects the Antenna/Pedestal tab, the operator will be able to view the items related to the Antenna/Pedestal. See [Figure 4-5](#).

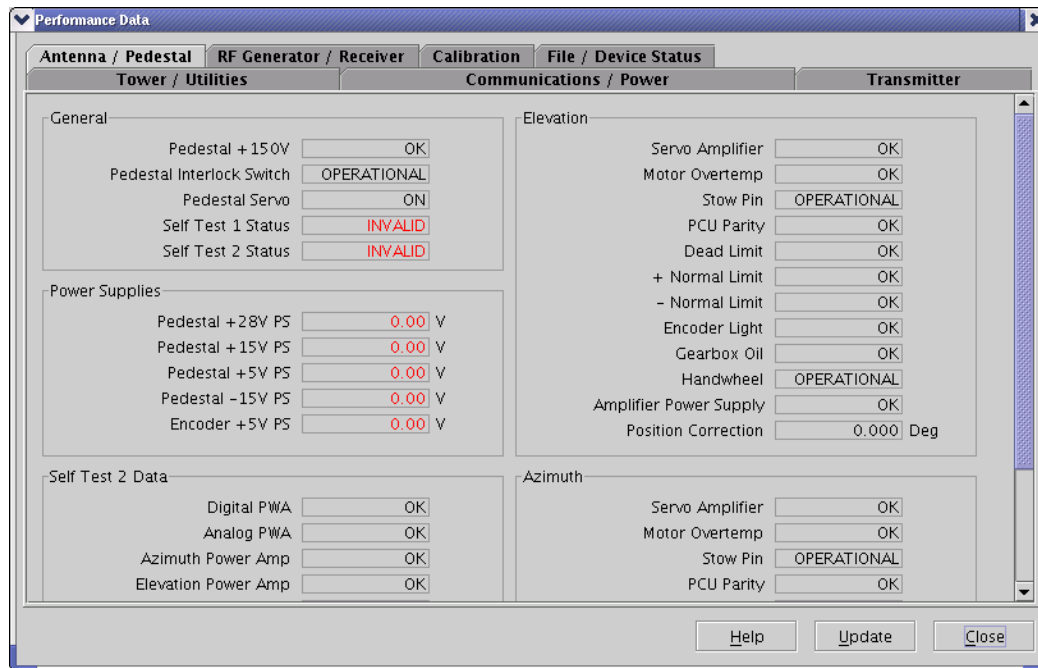


Figure 4-5. Antenna/Pedestal Tab of the RDA Performance Data Window

The Antenna/Pedestal tab has five categories of items. The Tables below list the five categories and their items (from top left to bottom right).

Table 4-16. General Category

Field	Valid Range
Pedestal +150V	OK - OVERVOLTAGE - UNDervOLTAGE
Pedestal Interlock Switch	OPERATIONAL - SAFE
Pedestal Servo	ON - OFF
Self Test 1 Status	NO - OK - FAIL
Self Test 2 Status	NO - OK - FAIL

Table 4-17. Power Supplies Category

Field	Valid Range
Pedestal +28 Volts PS	Dynamically set from value in Adaptation Data.
Pedestal +15 Volts PS	Dynamically set from value in Adaptation Data.
Pedestal +5 Volts PS	Dynamically set from value in Adaptation Data.
Pedestal -15 Volts PS	Dynamically set from value in Adaptation Data.
Encoder +5 Volts PS	Dynamically set from value in Adaptation Data.

Table 4-18. Self Test 2 Data Category

Field	Valid Range
Digital PWA	OK - FAIL
Analog PWA	OK - FAIL
Azimuth Power Amp	OK - FAIL
Elevation Power Amp	OK - FAIL
Azimuth Motor	OK - FAIL
Elevation Motor	OK - FAIL
Azimuth Encoder	OK - FAIL
Elevation Encoder	OK - FAIL

Table 4-19. Elevation Category

Field	Valid Range
Servo Amplifier	OK - INHIBIT - SHORT CIRCUIT - OVERTEMP

Table 4-19. Elevation Category - Continued

Field	Valid Range
Motor Overtemp	OK - OVERTEMP
Stow Pin	ENGAGED - OPERATIONAL
PCU Parity	OK - FAIL
Dead Limit	OK - IN LIMIT
+ Normal Limit	OK - IN LIMIT
- Normal Limit	OK - IN LIMIT
Encoder Light	OK - FAIL
Gearbox Oil	OK - OIL LEVEL LOW
Handwheel	OPERATIONAL - ENGAGED
Amplifier Power Supply	OK - FAIL
Position Correction	-1.0 to 1.0

Table 4-20. Azimuth Category

Field	Valid Range
Servo Amplifier	OK - INHIBIT - SHORT CIRCUIT - OVERTEMP
Motor Overtemp	OK - OVERTEMP
Stow Pin	ENGAGED - OPERATIONAL
PCU Parity	OK - FAIL
Encoder Light	OK - FAIL
Gearbox Oil	OK - OIL LEVEL LOW
Bullgear Oil	OK - OIL LEVEL LOW
Handwheel	OPERATIONAL - ENGAGED
Amplifier Power Supply	OK - FAIL
Position Correction	-1.0 to 1.0

Section 4.6 RF Generator/Receiver Tab

When the operator selects the RF Generator/Receiver tab, the operator will be able to view the items related to the RF Generator and Receiver. See [Figure 4-6](#).

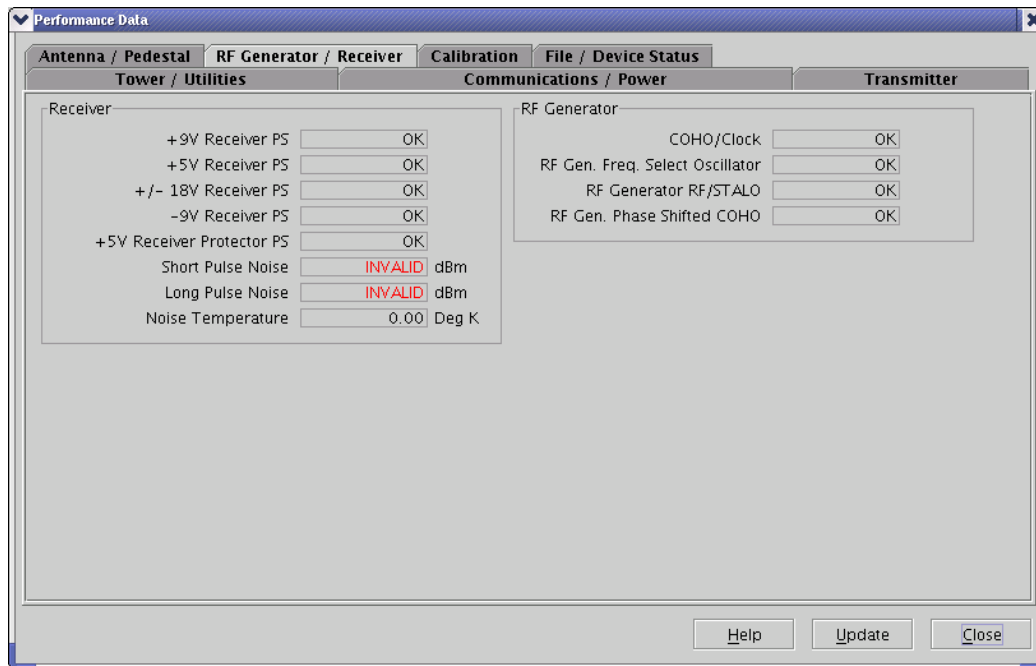


Figure 4-6. RCVR/RF Tab of the Performance Data Window

The RF Generator/Receiver tab has two categories of items. The tables below list the two categories and their items (from top left to bottom right).

Table 4-21. Receiver Category

Field	Valid Range
+9V Receiver PS	OK - FAIL
+5V Receiver PS	OK - FAIL
+/- 18V Receiver PS	OK - FAIL
-9V Receiver PS	OK - FAIL
+5V Receiver Protector PS	OK - FAIL
Short Pulse Noise	N/A

[Table of Contents](#)

Table 4-21. Receiver Category - Continued

Field	Valid Range
Long Pulse Noise	N/A
Noise Temperature	N/A

Table 4-22. RF Generator Category

Field	Valid Range
COHO/Clock	OK - FAIL
RF Gen. Freq. Select Oscillator	OK - FAIL
RF Generator RF/STALO	OK - FAIL
RF Gen. Phase Shifted COHO	OK - FAIL

Section 4.7 Calibration Tab

When the operator selects the Calibration tab, the operator will be able to view the items related to the calibration. See [Figure 4-7](#).

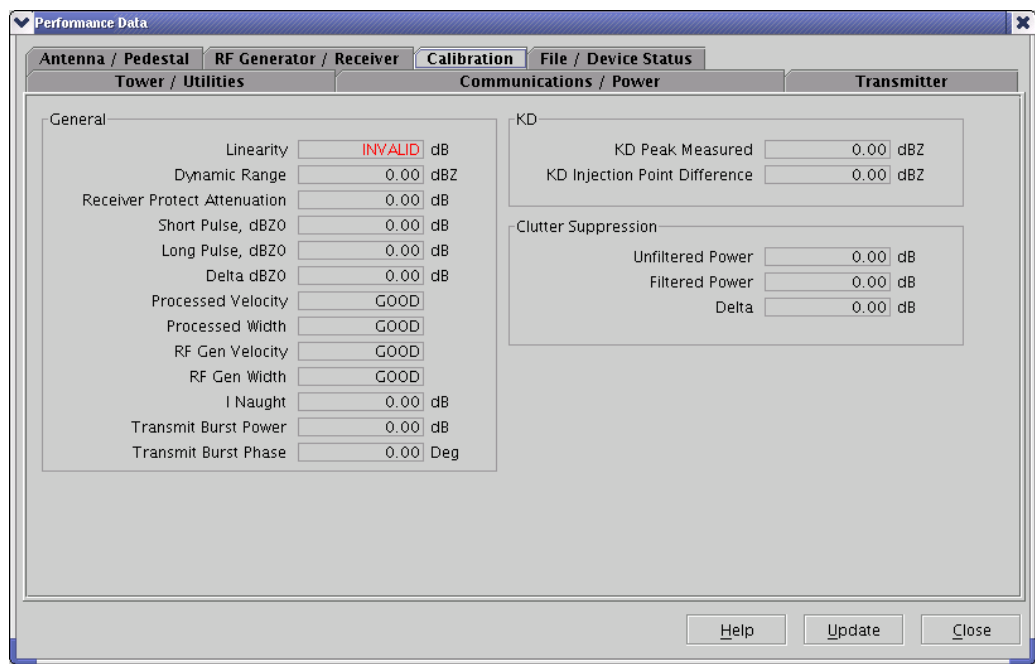


Figure 4-7. Calibration Tab of the RDA Performance Data Window

The Calibration tab has three categories of items. The tables below list the three categories and their items (from top left to bottom right).

Table 4-23. General Category

Field	Valid Range
Linearity	N/A
Dynamic Range	N/A
Rcvr Prot Attenuator	N/A
Short Pulse, dBZ0	N/A
Long Pulse, dBZ0	N/A
Delta dBZ0	-198.0 to 198.0

Table 4-23. General Category - Continued

Field	Valid Range
Processed Velocity	GOOD - FAIL
Processed Width	GOOD - FAIL
RF Gen Velocity	GOOD - FAIL
RF Gen Width	GOOD - FAIL
I Naught	N/A
Transmit Burst Power	-99.9 to 99.9
Transmit Burst Phase	-99.9 to 99.9

Table 4-24. KD Category

Field	Valid Range
KD Peak Measured	N/A
KD Injection Point Difference	N/A

Table 4-25. Clutter Suppression Category

Field	Valid Range
Unfiltered Power	N/A
Filtered Power	N/A
Delta	N/A

Section 4.8 File/Device Status Tab

When the operator selects the File/Device Status tab, the operator will be able to view the items related to the file and device status. See [Figure 4-8](#).

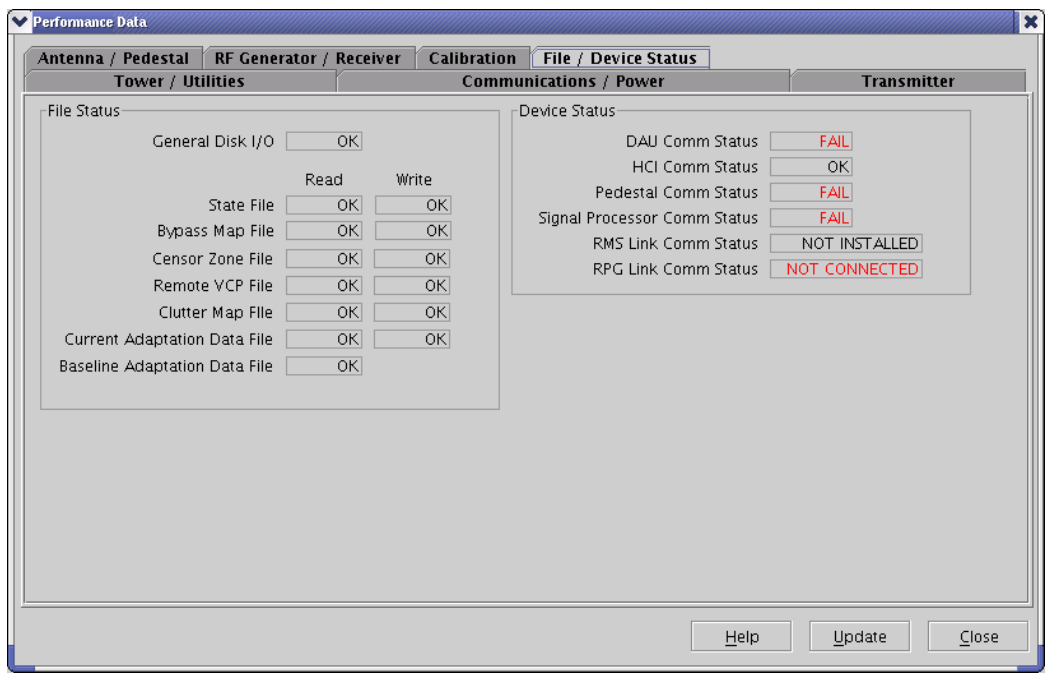


Figure 4-8. File/Device Status Tab of the RDA Performance Data Window

The File/Device Status tab has two categories of items. The tables below list the two categories and their items (from top left to bottom right).

Table 4-26. File Status Category

Type	Field	Valid Range
	General Disk I/O	OK - FAIL
State File	Read	OK - FAIL
	Write	OK - FAIL
Bypass Map File	Read	OK - FAIL
	Write	OK - FAIL

Table 4-26. File Status Category - Continued

Type	Field	Valid Range
Censor Zone File	Read	OK - FAIL
	Write	OK - FAIL
Remote VCP File	Read	OK - FAIL
	Write	OK - FAIL
Clutter Map File	Read	OK - FAIL
	Write	OK - FAIL
Current Adaptation Data File	Read	OK - FAIL
	Write	OK - FAIL
Baseline Adaptation Data File	Read	OK - FAIL
	Write	OK - FAIL

Table 4-27. Device Status Category

Field	Valid Range
DAU Comm Status	OK - FAIL
HCI Comm Status	OK - FAIL
Pedestal Comm Status	OK - FAIL
Signal Processor Comm Status	OK - FAIL
RMS Link Comm Status	CONNECTED - NOT CONNECTED - NOT INSTALLED
RPG Link Comm Status	CONNECTED - NOT CONNECTED

